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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	Application No. 10/540,498	Applicant(s) BENFORD ET AL.	
	Examiner Robert R. Rainey	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 6-12, 15, 17-21, 24, 32-35 and 37-39 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 6-12, 15, 17-21, 24, 32-35, and 37-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/23/2005, 10/25/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 32 and 33** rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,712,658 to *Arita et al.* ("*Arita*").

As to **claim 32**, *Arita* discloses a user interface located at a user device for use in selecting a target area and a corresponding output file for an optically activated interactive apparatus comprising: a first input mechanism for selecting an area of an image displayed upon a screen of the device as a target area (see for example Fig. 44, which teaches entering x/y coordinates as the first input mechanism); a second input mechanism for selecting the output file corresponding to the selected target area and/or another aspect of the image (see for example Fig. 44, which teaches entering file text into a particular row associated with the x/y coordinates as the second input mechanism), the target area and output file having a link generated there between (see for example Fig. 43 and Fig. 44 in which the linked relationship is illustrated in the table shown in Fig. 44 and Fig. 43 indicates that an effective link is generated since the

character string is output upon identification of the appropriate graphic object); and an output mechanism arranged to output the output file upon a trigger condition being fulfilled (see for example Fig. 43 in which item 139 shows the trigger condition being fulfilled "DETERMINE SPECIFIED OBJECT..." and item 140 shows the file being output "OUTPUT CHARACTER STRING (SPECIFIED OBJECT)").

As to **claim 33**, in addition to the rejection of claim 32 over *Arita*, *Arita* further discloses that the trigger condition is an image capturer (see for example Fig. 1 item 4) capturing an image of the target area (see for example Fig. 1 item 1) being at least partially illuminated by a broad beam light source (see for example Fig. 1 item 5b or Fig. 9 or Fig. 19 or Fig. 40, which clearly shows the broad nature of the beam since the broad illumination spot is processed to identify a particular pointing point, i.e. a not-broad point).

3. **Claims 37 and 38** rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,307,457 to *Beitel et al.* ("*Beitel*").

As to **claim 37**, *Beitel* discloses a method of defining a target area within a scene comprising: displaying a reference image upon a screen (see for example Fig. 2); selecting an area of a screen as a target area (see for example Fig. 2 item 40 and Fig.4); and confirming the selection of the target area (see for

example Fig.4 in which the affirmative branch of item 104 "Field Defined"? represents a confirmation of the selection of the target area or column 3 lines 56-57).

The clause ", for use with an apparatus in accordance with an optically triggered interactive apparatus, comprising a scene capturer arranged to capture an image of a scene, a target selector arranged to select a target area within a reference image of the scene, a detector arranged to detect the presence of light incident within the target area of an active video image captured by the scene capturer, the detector being arranged to determine an outer extent of an illuminated area, illuminated by a light source, within the scene, and the detector being arranged to output a trigger signal to a processor when a given proportion of the target area forms part of the illuminated area and/or when a given proportion of the illuminated area lies within the target area," does not affect the described method steps in a manipulative way and is accorded no patentable weight.

As to **claim 38**, in addition to the rejection of claim 37 *Beitel* further discloses a user manipulated device such as a keyboard, mouse, trackball, or touchscreen to select the target area from the screen (see for example Fig. 1 "Cursor Control" or column 3 lines 49-52 and column 1 lines 17-18, which indicates that a cursor may be moved using a mouse or a keyboard).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 6-12, 15, 17-21, 24, 34-35, and 39** are rejected under 35 U.S.C.

103(a) as being unpatentable over U.S. Patent No. 6,873,314 to *Campbell* ("*Campbell*") in view of U.S. Patent No. 5,712,658 to *Arita et al.* ("*Arita*") and further in view of U.S. Patent No. 5,307,457 to *Beitel et al.* ("*Beitel*").

As to **claim 1**, *Campbell* discloses a system for recognition of reading skimming and scanning from eye-gaze patterns and in particular: an optically triggered interactive apparatus with a detector being arranged to output a trigger signal to a processor when an attentional threshold has been exceeded (see for example column 3 lines 18-25 with the signal being fixation recognition or column 5 lines 51-64 with the signal being the determination of read or skimmed).

*Campbell* does not expressly disclose, a scene capturer arranged to capture an image of a scene, a target selector arranged to select a target area within a reference image of the scene, a detector arranged to detect the presence of light incident within the target area of an active video image captured by the scene capturer, the detector being arranged to determine an outer extent of an illuminated area, illuminated by a light source, within the scene, and the detector being arranged to identify when a given proportion of the target area

forms part of the illuminated area and/or when a given proportion of the illuminated area lies within the target area.

*Arita* discloses an information presentation apparatus which can precisely present information relating to an object to be displayed pointed by each pointer even when a plurality of pointers are used and in particular: a scene capturer (see for example Fig. 1 item 4) arranged to capture an image of a scene (see for example Fig. 1 item 1), a target selector arranged to select a target area of the scene (see for example Fig. 44, which is a table specifying the position and sizes of pointing, i.e. target, areas and column 32 lines 16-20), a detector arranged to detect the presence of light incident within the target area of an active video image captured by the scene capturer (see for example Fig. 1 item 2 "IMAGE PROCESSING UNIT"), the detector being arranged to determine an outer extent of an illuminated area (see for example Fig. 3 and Fig. 4D and column 8 lines 10-38 or Fig. 40), illuminated by a light source (see for example Fig. 1 items Pa and Pb), within the scene, and determination of which target area is indicated according to the portion of the scene illuminated by the light source (see for example column 8 lines 59-63 or Fig. 40 or column 12 lines 64-67; note that *Arita* chose the center of the illuminated area as the point that must overlap the target area, i.e. a given portion rather than a given proportion of the illuminated area).

*Campbell* and *Arita* are analogous art because they are from the same field of endeavor, which is user interface devices, and attempt to solve the same

problem, which is to determine the attentional focus point of a user within a scene.

*Campbell and Arita* do not expressly disclose the detector being arranged to identify when a given proportion of the target area forms part of the illuminated area and/or when a given proportion of the illuminated area lies within the target area.

Examiner takes official notice that identification of a target as a result of boundary interaction between the target and the selector was well known to those of ordinary skill in the art at the time of the invention. As evidence of this see for example U.S. Patent No. 5,668,571 to Pai et al. column 2 lines 34-42 particularly: "If the boundaries of the cursor overlap that of the icon, a determination is made that the cursor is pointed at the icon."

*Campbell and Arita* disclose the claimed invention with the exception of the detector being arranged to identify when a given proportion of the target area forms part of the illuminated area and/or when a given proportion of the illuminated area lies within the target area. It would have been obvious to one having ordinary skill in the art at the time the invention was made to arrange the detector as claimed, since it was known in the art to identify targets via boundary overlap and it has been held that discovering an optimum value of a result effective variable, i.e. the proportion of overlap, involves only routine skill in the art. In re Boesch, 617 F.2d 272,205 USPQ 215 (CCPA 1980).



*Campbell* and *Arita* do not expressly disclose a target selector arranged to select a target area within a reference image.

*Beitel* discloses a target selector arranged to select a target area within a reference image (see for example Fig. 2 and Fig. 4 with particular attention to Fig. 4 item 102 "MOVE CURSOR TO ESTABLISH A FIELD LIMIT", wherein the target selector is the cursor, the target area is the field limit, and the reference image is the image displayed).

*Campbell*, *Arita* and *Beitel* are analogous art because they are from the same field of endeavor, which is user interface devices, and attempt to solve the same problem, which is to determine the attentional focus point of a user within a scene.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to use the field limit identification method as disclosed by *Beitel* to define targets for the system after *Campbell* and *Arita*. The suggestion/motivation would have been to provide advantages such as to identify trigger fields on an image (see for example *Beitel* column 1 lines 25-29) or to allow the user to view a reference image in order to aid placement of the targets/trigger-fields (see for example *Beitel* column 4 lines 46-48).

As to **claim 6**, in addition to the rejection of claim 1 over *Campbell*, *Arita* and *Beitel*, *Campbell* further discloses that the detector is arranged to track the attentional focus point of the user over the scene (see for example column 6 lines

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43-44); and *Arita* further discloses that the detector is arranged to track movement of at least one beam of light incident upon the scene (see for example column 27 lines 10-11).

As to **claim 7**, in addition to the rejection of claim 1 over *Campbell, Arita and Beitel*, *Arita* further discloses that the detector is arranged to monitor either, or both, of an intensity profile and/or a chromatic profile of a light source, incident upon the scene (see for example Figs. 4-9 and column 18 lines 14-22, in which the shape of the beam is the intensity profile and the colors and combinations of colors is the chromatic profile).

As to **claim 8**, in addition to the rejection of claim 1 over *Campbell, Arita and Beitel*, *Campbell* further discloses that the detector is arranged to track the attentional focus point of the user over the scene (see for example column 6 lines 43-44); and *Arita* further discloses that the detector is arranged to track a given light source, incident upon the scene based upon whether, one, or both, of the intensity profile and/or the chromatic profile of the light source incident upon the scene (see for example column 27 lines 10-11 and see for example Figs. 4-9 and column 18 lines 14-22, in which the shape of the beam is the intensity profile and the colors and combinations of colors is the chromatic profile).

As to **claim 9**, in addition to the rejection of claim 1 over *Campbell, Arita* and *Beitel*, *Arita* further discloses that the light source is arranged to be modulated (see for example column 7 lines 53-55 noting that the "turn-off" of the beam is a modulation of the beam; note also that *Arita* discloses using modulation signal of a separate signal to identify the pointers see for example Fig. 27 and column 22 line 67 to column 23 line 2).

As to **claim 11**, in addition to the rejection of claim 1 over *Campbell, Arita* and *Beitel*, *Campbell* further discloses a detector counting events that indicate attention or interest (see for example Table 1).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to use the apparatus of *Arita* to extend the counting of attentional focus events after *Campbell* to large multi-user interactive environments by counting the number of times a given light source passes over a given target area. The suggestion/motivation would have been to provide advantages such as to allow for determination of interest based on a threshold value (see for example *Campbell* column 4 lines 48-56).

As to **claim 12**, in addition to the rejection of claim 11 over *Campbell, Arita* and *Beitel*, *Campbell* further discloses that the detector is arranged to output a trigger signal that is dependent upon the value of the counter (see for example column 5 lines 19-22 in which the detection of reading is the trigger signal).

As to **claim 15**, in addition to the rejection of claim 1 over *Campbell, Arita* and *Beitel*, *Arita* further discloses the transmission of a trigger signal via wireless communication (see for example column 22 lines 63-64).

*Campbell, Arita and Beitel* disclose the claimed invention with the exception of transmitting the trigger signal wirelessly over a local area network (WLAN) to the actuator.

Examiner takes official notice that transmitting trigger signals wirelessly over a local area network (WLAN) to an actuator was well known to those skilled in the art at the time of the invention. User interfaces were commonly used with network attached devices of both wired and wireless types. A simple type of trigger signal that was commonly transmitted is a mouse click event transmitted to a web server, e.g. actuator.

It would have been an obvious matter of design choice for one having ordinary skill in the art at the time the invention was made to transmit the trigger signal wirelessly over a local area network (WLAN) since applicant has not disclosed that transmitting the signal wirelessly solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with wired or wireless transmission.

As to **claim 17**, in addition to the rejection of claim 1 over *Campbell, Arita* and *Beitel*:

*Campbell, Arita and Beitel* disclose the claimed invention except for a plurality of image capturers, each of which are arranged to capture an active image of the scene from different angles. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize a plurality of image capturers, each of which are arranged to capture an active image of the scene from different angles, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co* , 193 USPQ 8.

As to **claim 18**, in addition to the rejection of claim 17 over *Campbell, Arita and Beitel*:

*Campbell, Arita and Beitel* disclose the claimed invention except for the detector being arranged to receive inputs from each of the image capturers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to so arrange the detector, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co* , 193 USPQ 8. In addition it would have been obvious to one having ordinary skill in the art at the time the invention was made to so arrange the detector, since time multiplexing of signals was well known as a way to utilize a single processing resource over multiple signals, thus requiring only ordinary skill in the art for the extension from a single input signal source to multiple signal sources.

As to **claim 19**, in addition to the rejection of claim 17 over *Campbell, Arita and Beitel*: the limitation of claim 19 that the detector is arranged to output a trigger signal to the actuator if one or more target areas is illuminated in at least one of the active images was covered by the rejection of claim 1.

As to **claim 20**, in addition to the rejection of claim 1 over *Campbell, Arita and Beitel*, *Arita* further discloses that the scene is a virtual scene (see for example Fig. 1 item 4) and selecting target areas based on a map of the virtual scene (see for example Fig. 44; note that the map used is simple a grid of x,y coordinates), and *Beitel* further discloses that the scene is a virtual scene (see for example Fig. 2) and the reference image is a map of the virtual scene (see for example Fig. 2 noting that a map of a virtual scene may be a unity mapping in which the scene is used as a map of itself).

As to **claim 20**, claim 20 represents the method implicit in the apparatus claimed in claim 1 and is rejected on the same grounds and arguments.

As to **claim 24**, claim 24 represents the method implicit in the apparatus claimed in claim 7 and is rejected on the same grounds and arguments.

As to **claim 34**, claim 34 is a method claim that claims some method steps using the apparatus of claim 1. Without necessarily according patentable weight to the “using” clause, i.e. from “using an optically...” to “...within the target area,”, any portion of the apparatus that may be deemed to have patentable weight is rejected by incorporation of the rejection of claim 1 by reference.

The rejection of claim 1 over *Campbell*, *Arita* and *Beitel* did not explicitly cover: A method of determining user demographic statistics, the method comprising the steps of: providing each user with an identifiable light source; recording demographic information about each user; recording each time a target area is triggered by a user; and identifying each user by correlating their identifiable light source with their demographic information.

*Arita* further discloses providing each user with an identifiable light source (see for example Fig. 1 items Pa and Pb); recording demographic information about each user (see for example Fig. 1 and column 7 lines 17-29, in which the demographic information “operator” is associated with light source Pa and the demographic information “manager” is associated with light source Pb); and identifying each user by correlating their identifiable light source with their demographic information (see for example Fig. 1).

*Campbell* further discloses recording each time a target area is triggered by a user (see for example Table 1) and associating interest and demographic information (see for example column 7 lines 1-13).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to use the apparatus of *Arita* to extend the counting of attentional focus events and their association to user demographic data after *Campbell* to large multi-user interactive environments by recording the number of times a given light source passes over a given target area. The suggestion/motivation would have been to provide advantages such as to allow for determination of interest based on a threshold interest value (see for example *Campbell* column 4 lines 48-56) or to determine level of payment in a multi-user environment (see for example *Campbell* column 7 lines 6-8) or to present information differently to different users based on their demographics (see for example *Arita* column 9 line 66 to column 10 line 6 or column 10 lines 52-62).

As to **claim 35**, in addition to the rejection of claim 34 over *Campbell*, *Arita* and *Beitel*, *Campbell* further discloses recording interest level information (see for example *Campbell* column 4 lines 48-56 or Table 1) including time based information (see for example column 1 lines 30-34) and determining interest level by the amount of time a user focuses on a particular area and determining the level of user interaction with an object(see for example column 5 lines 51-64).

As to **claim 39**, claim 39 represents the method implicit in the apparatus claimed in claim 1 as a computer readable stored program. Claim 39 is rejected



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on the same grounds and arguments as claim 1 with the additional argument that:

*Campbell*, *Arita* and *Beitel* each discloses stored program methods either implicitly or explicitly (see for example *Campbell* claim 25, or *Arita* Fig. 2 item 65, or *Beitel* column 1 lines 8-11).

### ***Claim Objections***

6. Claim 19 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 19 recites the limitation "the detector is arranged to output a trigger signal to the actuator if one or more target areas is illuminated in at least one of the active images" but claim 1 already includes the limitation "the detector being arranged to output a trigger signal to a processor when a given proportion of the target area forms part of the illuminated area and/or when a given proportion of the illuminated area lies within the target area", thus a requirement already exists for the limitation recited in claim 19, which is dependent through other parent claims on claim 1. Here the Examiner assumes that the change in terminology from "processor" in the parent claim to "actuator" in the dependent claim is inadvertent - see objection below.

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7. Claims 15 and 19 objected to because of the following informalities: the phrase "the actuator" in these claims has no antecedent basis in the preceding claims.

Appropriate correction is required.

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

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8. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Claim 39 recites "A computer readable medium", which is not found in the body of the specification.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,741,185 to Kwan et al. discloses modulating the light produced by illuminators in order to distinguish between them.

U.S. Patent No. 6,952,198 to Hansen discloses modulating the light produced by illuminators in order to distinguish between them.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Rainey whose telephone number is (571) 270-3313. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on (571) 272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RR/

  
AMARE MENGISTU  
SUPERVISORY PATENT EXAMINER